DOCUMENT RESUME

ED 263 214 TM 850 709

AUTHOR Dana, Richard H.; And Others
TITLE Sense of Coherence: Examination of the Construct.
PUB DATE 18 Apr 85
NOTE 19p.; Paper prepared for the Annual Meeting of the Southeastern Psychological Association (Austin, TX, April 18-20, 1985).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attribution Theory; Correlation; Diseases; *Etiology; *Health; Higher Education; *Holistic Approach; *Locus of Control; Prediction; Psychometrics; *Self Concept Measures
IDENTIFIERS *Sense of Coherence

ABSTRACT

The Sense of Coherence (SOC) construct, proposed by Antonovsky, has the following three components: (1) Comprehensibility (COMP), the cognitive sense that stimuli confronted convey structured and clear information; (2) Manageability (MAN), the sense that resources at one's disposal are adequate for successful coping; and (3) Meaningfulness (MEAN), the emotional counterpart of comprehensibility. Research instruments developed by Antonovsky, Payne, and Rumbaut to measure the Sense of Coherence construct were employed in this study. Subjects were 179 Univeristy of Arkansas psychology students. The following findings are reported: (1) Antonovsky and Rumbaut total scores measure a similar construct; (2) Antonovsky subscales are highly correlated with the total SOC score; (3) relationships between most Antonovsky and Payne subscales are significant; (4) subscale intercorrelations are appreciably higher for Antonovsky subscales than for Payne subscales; (5) independent construct measures for COMP, MAN, and MEAN are consistently associated only with Antonovsky subscales, (6) Antonovsky total and subscale correlations with health measures are consistent in direction and significance; (7) Antonovsky total score and subscale measures are consistently and predictably related to Multidimensional Health Locus of Control (MHLC) components; and (8) Antonovsky total score and subscore measures are positively and significantly related to both social support indices. The Antonovsky SOC instrument is a more adequate measure of salutogenesis than either the Payne or Rumbaut instruments. References and eight tables are appended. (LMO)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED263214

# Sense of Coherence: Examination of the Construct

Richard H. Dana  Tom Hoffmann

Bonnie Armstrong  Joni Wilson

University of Arkansas

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

TM 850 709

Handout prepared for Southeastern Psychological Association poster session, April 18, 1985, Austin Hilton, Crown East, Board 0, 9:30-10:50 AM.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. H. Dana

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

## Introduction

Aaron Antonovsky has proposed the Sense of Coherence construct (SOC) to facilitate understanding of salutogenesis or health (Antonovsky, 1984). Sense of Coherence refers to a "global orientation that expressed the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected (Antonovsky, 1979, p. 123)". There are 3 components of Sense of Coherence. Comprehensibility (COMP) is the cognitive sense that stimuli confronted convey structured and clear information and hence predictability is assumed. Manageability (MAN) refers to a sense that resources at one's disposal are adequate for successful coping. Meaningfulness (MEAN) is the emotional counterpart of comprehensibility that makes the engagement with daily life a welcome rather than a burdensome commitment.

Antonovsky (1983) developed a 29-item research instrument to measure these components and to provide a total score for Sense of Coherence. He used two formats -- multiple-choice and semantic differential -- with a national Israeli sample (N = 608) and found only minor differences in index reliability (Cronbach Alpha) between formats. Independently, two other researchers haveattempted to measure the Sense of Coherence construct. Payne (1982) developed a 40-item scale with a total score and three components while Rumbaut and colleagues (Rumbaut, Anderson, Kaplan & Turek, 1981) developed a 22-item Likert-type index using factor analysis to obtain a total score.

## Method

This study examined three separate measures of Sense of Coherence (SOC) and subscales from two of these measures, Comprehensibility (COMP), Manageability (MAN), and Meaningfulness (MEAN). Table 1 lists all measures which were selected to include criterion health, health locus of control, independent measures of each subscale, three response sets, and two social support indices. Subjects were 179 University of Arkansas General Psychology students, 82 males and 97 females. Intercorrelations for the entire sample only are reported here.

## Results

1. Antonovsky and Rumbaut total scores measure a similar construct (Table 2).

2. Antonovsky subscales are highly correlated with the total SOC score (Table 3).

3. Significant relationships were found between most Antonovsky and Payne subscales (Table 4).

4. Subscale intracorrelations were appreciably higher for Antonovsky subscales than for Payne subscales (Table 5).

5. Independent construct measures for COMP, MAN, and MEAN were consistently associated only with Antonovsky subscales (Table 6). These construct measures did not distinguish among Antonovsky subscales.

6. Antonovsky total and subscale correlations with health measures were consistent in direction and significance (Table 7). Rumbaut total score correlations with health measures were less consistent in direction and magnitude. Payne total score and subscale correlations with health measures were largely non-significant. Social Desirability

and Acquiescence response set scores are positively corerlated with Antonovsky measures while Opposition response set is negatively correlated.

7. Antonovsky total score and subscale measures are consistently and predictably related to MHLC components, i.e., positively and significantly with I, negatively and significantly with C, and unrelated to PO (Table 8). Payne total and subscale measures show a similar pattern but without the consistency, predictability, or significance. The Rumbaut measure is similar to the Antonovsky total score.

8. Antonovsky total score and subscale measures are positively and significantly related to both social support indices. Payne and Rumbaut measures show a similar pattern of lesser magnitude relationship.

## Discussion

The Antonovsky SOC instrument is a more adequate measure of salutogenesis than either the Payne or Rumbaut instruments, although all three measure a similar construct. However, the Antonovsky subscale scores -- COMP, MAN, MEAN -- are highly intercorrelated and not distinguishable by criterion measures of the subscale components. While these subscales provide useful empirical conceptualizations of the SOC components, they should be used with caution.

The Antonovsky SOC score was consistently and significantly related to all positive health measures while being significantly and negatively related to all illness measures. The significant and positive correlations with Social Desirability are consistent with Edwards' findings (1970). Antonovsky's conceptualization of salutogenesis is given considerable support by these correlations.

The Antonovsky-MHLC relationships are also congruent with salutogenesis; i.e., an internal health locus of control, rejection of chance, and indifference to influence from powerful others. Similarly, social support measures that include numbers of support persons and a satisfaction index are also clearly associated with SOC.

This demonstration of predictable SOC relationships with a variety of external measures is remarkably consistent. The power of the SOC construct as a global measure of holistic health is supported. Since the status of all holistic health measures derived from components is psychometrically suspect (Dana & Hoffmann, 1985), the SOC construct provides one psychometrically sound alternative, global measure.

References

Antonovsky, A. (1979). Health, stress and coping. San Francisco: Jossey-Bass.

Antonovsky, A. (1983, March). The Sense of Coherence: Development of a research instrument. Newsletter and Research Reports, 1, 11-22.

Antonovsky, A. (1984). The sense of coherence as a determinant of health. In J. D. Matarazzo, S. M. Weiss, J. A. Herd, N. E. Miller, & S. M. Weiss (Eds.), Behavioral health: A handbook of health enhancement and disease prevention (pp. 114-129). New York: Wiley.

Dana, R. H., & Hoffmann, T. (1985, in press). Holistic health: Definitions, measurement, and applications. In C. D. Spielberger & J. N. Butcher (Eds.), Advances in personality assessment. Volume 5. Hillsdale, NJ: Erlbaum.

Davies, A. R., & Ware, J. E., Jr. (1981). Measuring health perceptions in the health insurance experiment (R-2711-HHS). Santa Monica, CA: Rand.

Edwards, A. L. (1970). The measurement of personality traits by scales and inventories. New York: Holt, Rinehart and Winston.

Payne, L. (1982). Sense of Coherence: A measure of health status. Unpublished master's thesis, University of Alberta, Edmonton, Alberta, Canada.

Rumbaut, R. G., Anderson, J. P., Kaplan, R. MN., & Turek, J. K. (1981). Stress, health, and the "Sense of Coherence" Unpublished manuscript, Department of Sociology, C-002, University of California, San Diego, La Jolla, CA 92903.

Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. Journal of Personality and Social Psychology, 44, 127-139.

Tan, A. L., Kendis, R. J., Fine, J. T., & Korac, J. (1977). A short measure of Eriksonian ego identity. Journal of Personality Assessment, 41, 279-284.

Tobin, D. L., Holroyd, K., & Reynolds, R. (1982). The assessment of coping: Psychometric development of the Coping Strategies Inventory. Paper presented at the meeting of the Association for the Advancement of Behavior Therapy.

Wallston, K. A., Wallston, B. S., & DeVellis, R. (1978). Development of the Multidimensional Health Locus of Control (MHLC) Scales. Health Education Monographs, 6(2), 160-171.

TABLE 1

Measures

1. Payne Health Coherence Attitude Scale (Payne, 1982)
   a. Comprehensibility Subscale
   b. Manageability Subscale
   c. Meaningfulness Subscale

2. Antonovsky Sense of Coherence, Semantic Differential version (Antonovsky, 1983)
   a. Comprehensibility Subscale
   b. Manageability Subscale
   c. Meaningfulness Subscale

3. Sense of Coherence (Rumbaut, Anderson, Kaplan & Turek, 1981)

4. General Health Rating Index (Davies & Ware, 1981)
   a. Current Health Subscale
   b. Prior Health Subscale
   c. Health Outlook Subscale
   d. Resistance to Illness Subscale
   e. Health Worry Subscale
   f. Sickness Orientation Subscale
   g. Ladder of Health
   h. General Health, Question 1 (Health Status)
   i. General Health, Question 2 (Pain)
   j. General Health, Question 3 (Worry)
   k. Social Desirability Response Set
   l. Acquiescence Response Set
   m. Opposition Response Set

5. Multidimensional Health Locus of Control (Wallston & Wallston, 1978)
   a. Internal Health Locus of Control Subscale
   b. Powerful Others Health Locus of Control Subscale
   c. Chance Health Locus of Control Subscale

6. Comprehensibility: Edwards Personal Preference Schedule, Order

7. Manageability: Coping Strategy Inventory Items (Tobin, Holroyd & Reynolds, 1982)
   a. Self-Denigration items
   b. Avoidance items
   c. Problem-centered items
   d. Social-centered items
   e. Cognitive restructuring items
   f. Emotion-centered items

8. Meaningfulness: Ego Identity Scale (Tan, Kendis, Fine & Porac, 1977).

9. Social Support Questionnaire (Sarason, Levine, Basham & Sarason, 1983)
   a. Number of Support Persons
   b. Satisfaction score

Note. Listed in order of administration.

TABLE 2

Intercorrelations Between Total Sense of Coherence Scores

| | |
|---|---|
| Antonovsky/Rumbaut | 72 |
| Antonovsky/Payne | 39 |
| Payne/Rumbaut | 35 |

Note. Significance level in all tables is .0001 unless indicated. Decimal points are omitted from all tables.

TABLE 3

Intercorrelations Between Comprehensibility (COMP), Manageability (MAN), and Meaningfulness (MEAN) Subscales and Total Coherence Scores for Antonovsky and Payne

| Subscale | Antonovsky | Payne |
|---|---|---|
| COMP | 88 | 51 |
| MAN | 90 | 53 |
| MEAN | 78 | 46 |

TABLE 4

Antonovsky-Payne Intercorrelations Between Coherence Subscales Comprehensibility (COMP), Manageability (MAN), and Meaningfulness (MEAN).

| PAYNE | ANTONOVSKY | | |
|---|---|---|---|
| | COMP | MAN | MEAN |
| COMP | 19** | 30 | 38 |
| MAN | 44 | 48 | 42 |
| MEAN | 12 (ns) | 22* | 32 |

*p .005. **p .01.

TABLE 5

Antonovsky/Payne Intracorrelations Among Comprehensibility (COMP), Manageability (MAN), and Meaningfulness (MEAN) Subscales.

| | COMP | MEAN |
|---|---|---|
| MAN | 72/27*** | 60/20* |
| MEAN | 52/26** | |

*p .01. **p .0007. ***p .0004

10

TABLE 6

Correlations Between SOC Subscales, Comprehensibility (COMP), Manageability (MAN), Meaningfulness (MEAN), and Their Construct Equivalents

| | Construct Equivalent | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | COMP | MEAN | MAN | | | | | |
| Antonovsky | | | a | b | c | d | e | f |
| Total | 20 (01) | 57 (0001) | -18 (01) | -33 (0001) | 38 (0001) | 15 (06) | 44 (0001) | 22 (004) |
| COMP | 19 (01) | 51 (0001) | -16 (04) | -33 (0001) | 36 (0001) | 09 (ns) | 39 (0001) | 20 (008) |
| MAN | 16 (03) | 50 (0001) | -16 (03) | -28 (0002) | 38 (0001) | 17 (02) | 37 (0001) | 16 (03) |
| MEAN | 15 (04) | 47 (0001) | -15 (05) | -24 (001) | 23 (002) | 14 (ns) | 35 (0001) | 23 (003) |
| Payne | | | | | | | | |
| Total | -02 (ns) | 29 (0001) | -18 (02) | -19 (01) | 26 (0008) | 06 (ns) | 14 (ns) | 26 (0009) |
| COMP | -009 (ns) | 20 (009) | -17 (03) | -12 (ns) | 10 (ns) | 19 (01) | 03 (ns) | 16 (04) |
| MAN | 03 (ns) | 33 (0001) | -20 (009) | -23 (002) | 33 (0001) | 03 (ns) | 17 (02) | 10 (ns) |
| MEAN | -04 (ns) | 11 (ns) | 01 (ns) | 05 (ns) | 23 (003) | 13 (ns) | 11 (ns) | 19 (01) |

Note. p values are contained in parentheses

TABLE 7

Antonovsky/Payne, and Rumbaut Correlations with Health and Response Set Measures

| | | Health | | | | | | | | | | Response Set | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antonovsky | Index | S1 | S2 | S3 | S4 | S5 | S6 | Ladder | GH1 | GH2 | GH3 | SD | A | O |
| Total | | | | | | | | | | | | | | |
| | 40 (0001) | 37 (0001) | 29 (0001) | 31 (0001) | 32 (0001) | -04 (ns) | -16 (03) | 33 (0001) | 28 (0003) | -31 (0001) | -21 (006) | 24 (001) | 19 (01) | -19 (01) |
| COMP | 34 (0001) | 29 (0002) | 25 (001) | 31 (0001) | 25 (009) | -04 (ns) | -10 (ns) | 26 (0007) | 23 (002) | -25 (001) | -16 (03) | 24 (001) | 17 (02) | -17 (02) |
| MAN | 44 (0001) | 41 (0001) | 35 (0001) | 25 (0008) | 36 (0001) | -12 (ns) | 17 (02) | 28 (0003) | 26 (0005) | -27 (0004) | -25 (001) | 28 (0002) | 22 (004) | -22 (003) |
| MEAN | 22 (004) | 25 (0009) | 13 (ns) | 18 (02) | 19 (01) | 05 (ns) | -12 (ns) | 32 (0001) | 20 (009) | -28 (0003) | -15 (04) | 07 (ns) | 12 (ns) | -12 (ns) |
| Payne | | | | | | | | | | | | | | |
| Total | 16 (03) | 12 (ns) | 05 (ns) | 07 (ns) | 08 (ns) | -01 (ns) | -08 (ns) | 16 (03) | 13 (ns) | -04 (ns) | -02 (ns) | 12 (ns) | 07 (ns) | -07 (ns) |
| COMP | 09 (ns) | 08 (ns) | -02 (ns) | -06 (ns) | 07 (ns) | 01 (ns) | -06 (ns) | 13 (ns) | 07 (ns) | -07 (ns) | -10 (ns) | 09 (ns) | 02 (ns) | -02 (ns) |
| MAN | 16 (04) | 16 (04) | 13 (ns) | 16 (04) | 11 (ns) | 06 (ns) | 04 (ns) | 12 (ns) | 10 (ns) | -14 (ns) | -14 (ns) | 08 (ns) | 11 (ns) | -11 (ns) |
| MEAN | 09 (ns) | 07 (ns) | 10 (ns) | 02 (ns) | 12 (ns) | 00 (ns) | -06 (ns) | 10 (ns) | 06 (ns) | -06 (ns) | 06 (ns) | 20 (009) | 12 (ns) | -12 (ns) |
| Rumbaut | | | | | | | | | | | | | | |
| Total | 24 (001) | 28 (003) | 19 (01) | 17 (02) | 09 (ns) | 02 (ns) | 08 (ns) | 22 (003) | 18 (01) | 20 (009) | 06 (ns) | 15 (05) | 24 (001) | -24 (001) |

TABLE 8

Antonovsky (A), Payne (P), and Rumbaut (R) Correlations with Multidimensional Health Locus of Control (MHLC) Subscales and Social Support Measures

| | MHLC | | | Social Support | |
|---|---|---|---|---|---|
| | I | PO | C | Number | Satisfaction |
| A Total | 37 (0001) | -12 (ns) | -29 (0001) | 32 (0001) | 38 (0001) |
| A COMP | 35 (0001) | -14 (ns) | -27 (0004) | 24 (002) | 28 (0004) |
| A MAN | 31 (0001) | -09 (ns) | -23 (002) | 32 (0001) | 38 (0001) |
| A MEAN | 27 (0003) | -10 (ns) | -26 (0006) | 29 (0003) | 31 (0001) |
| P Total | 31 (0001) | -06 (ns) | -16 (04) | 24 (003) | 18 (03) |
| P COMP | 21 (005) | 08 (ns) | -06 (ns) | 20 (01) | 17 (03) |
| P MAN | 19 (01) | -21 (005) | -31 (0001) | 22 (005) | 20 (01) |
| P MEAN | 21 (006) | -02 (ns) | -16 (04) | 19 (02) | 17 (03) |
| R Total | 32 (0001) | -15 (04) | -29 (0002) | 19 (02) | 33 (0001) |